

This Page Is Inserted by IFW Operations
and is not a part of the Official Record

BEST AVAILABLE IMAGES

Defective images within this document are accurate representations of the original documents submitted by the applicant.

Defects in the images may include (but are not limited to):

- BLACK BORDERS
- TEXT CUT OFF AT TOP, BOTTOM OR SIDES
- FADED TEXT
- ILLEGIBLE TEXT
- SKEWED/SLANTED IMAGES
- COLORED PHOTOS
- BLACK OR VERY BLACK AND WHITE DARK PHOTOS
- GRAY SCALE DOCUMENTS

IMAGES ARE BEST AVAILABLE COPY.

**As rescanning documents *will not* correct images,
please do not report the images to the
Image Problem Mailbox.**

(12) UK Patent Application (19) GB (11) 2 349 365 (13) A

(43) Date of A Publication 01.11.2000

(21) Application No 9910137.0

(22) Date of Filing 30.04.1999

(71) Applicant(s)
 Stuart Green
 619 Thornton Road, Four Lane Ends, BRADFORD,
 BD8 0BL, United Kingdom

(72) Inventor(s)
 Stuart Green

(74) Agent and/or Address for Service
 Stuart Green
 619 Thornton Road, Four Lane Ends, BRADFORD,
 BD8 0BL, United Kingdom

(51) INT CL⁷
 B60P 3/34, E04H 15/06

(52) UK CL (Edition R)
 B7B BMD

(56) Documents Cited
 GB 2294498 A EP 0011041 A1 WO 88/09858 A1
 US 5669430 A US 5622214 A US 3599851 A

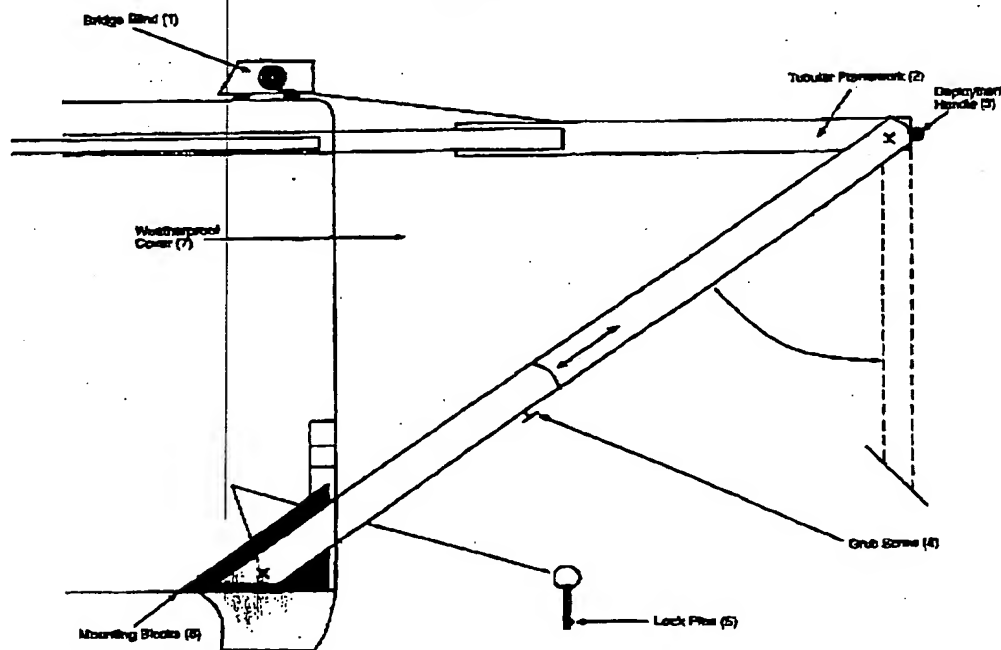
(58) Field of Search
 UK CL (Edition Q) B7B BMD, B7J J61, E1D DTEB
 DTEC DTNL DTNR DTNU DTNV, E1J JGT
 INT CL⁶ B60P 3/32 3/34, E04H 15/00 15/02 15/06
 15/08 15/48 15/64
 ONLINE: WPI, EPODOC, JAPIO

(54) Abstract Title
 Vehicle awning

(57) A weatherproof cover fitted to commercial vehicles, box trailers or multi-purpose vans is an extendible and retractable structure manufactured from lightweight tubing 2 with a waterproof cover. It is stowed in its own container on the host vehicle's roof or pulling the deployment handle (3) withdraws the cover from its stowage. The uprights can then be quickly rotated either to the ground or into special mounts fitted on the rear floor of the vehicle.

The cover affords weatherproof protection in any one position, throughout a 360 degree arc. The cover is ideal for tradesman, technicians and engineers servicing outside installations, and is retrofittable or readily incorporated on vehicle build.

Figure 1.



GB 2 349 365 A

Figure 1/4

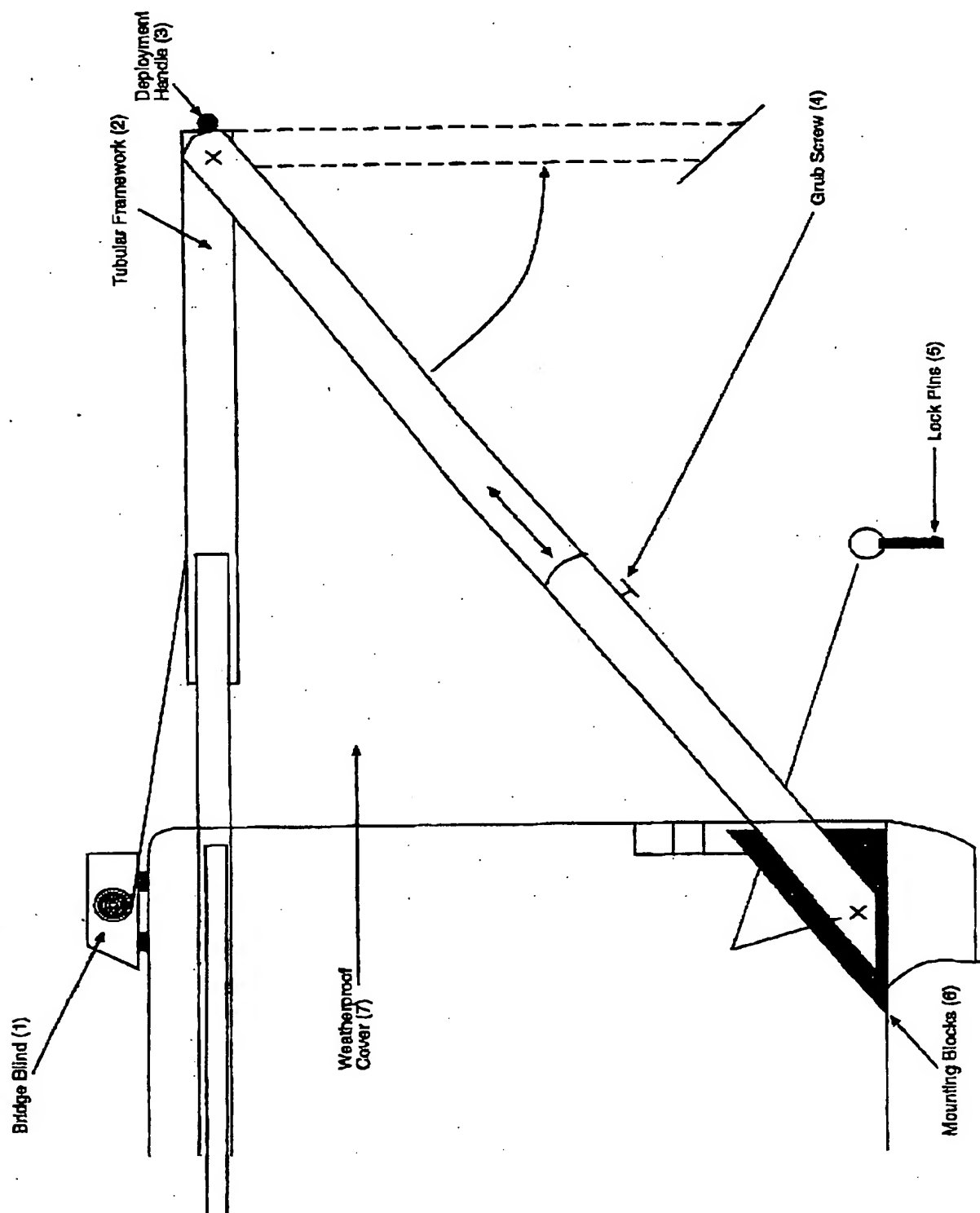


Figure 2/4

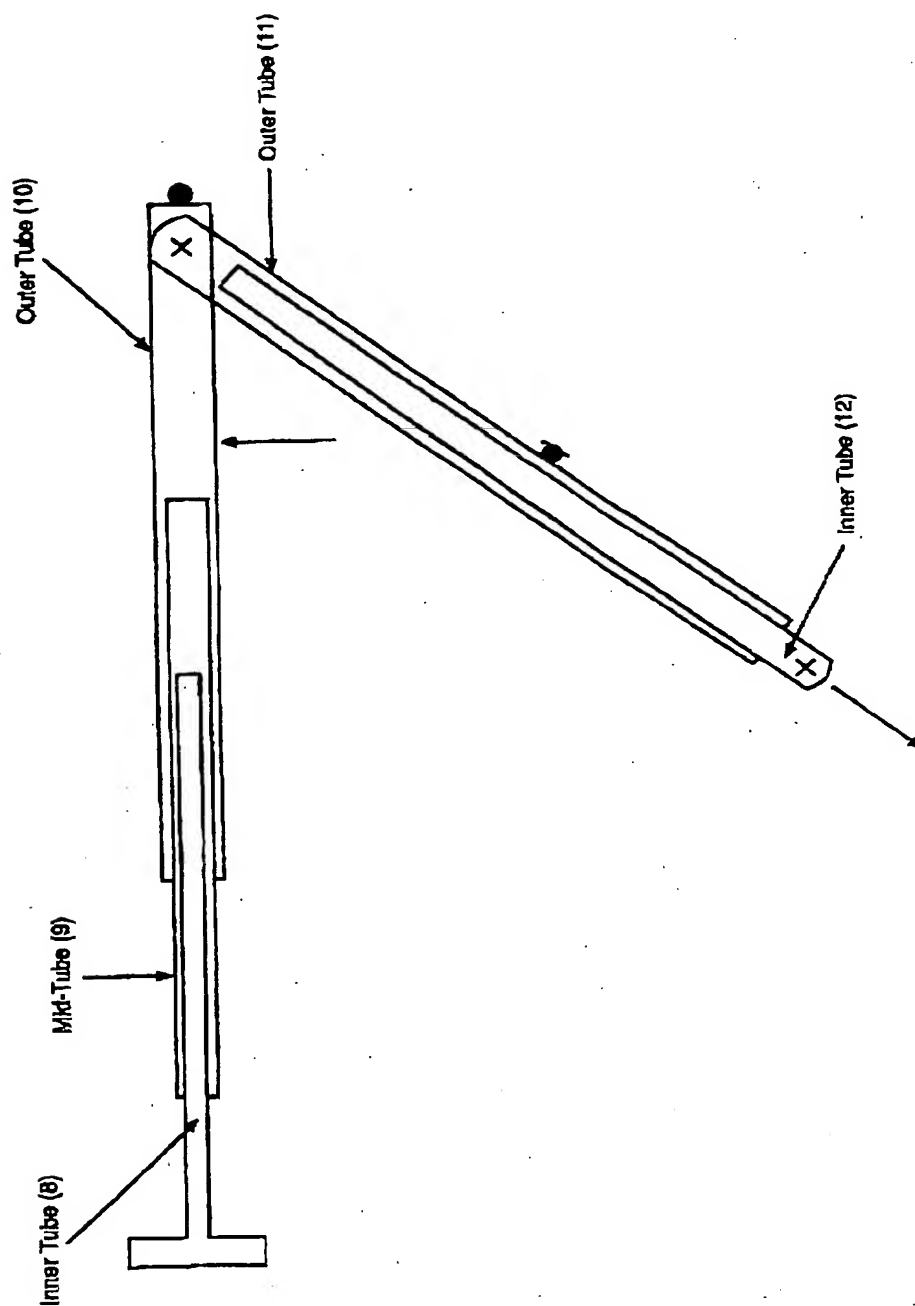


Figure 3/4

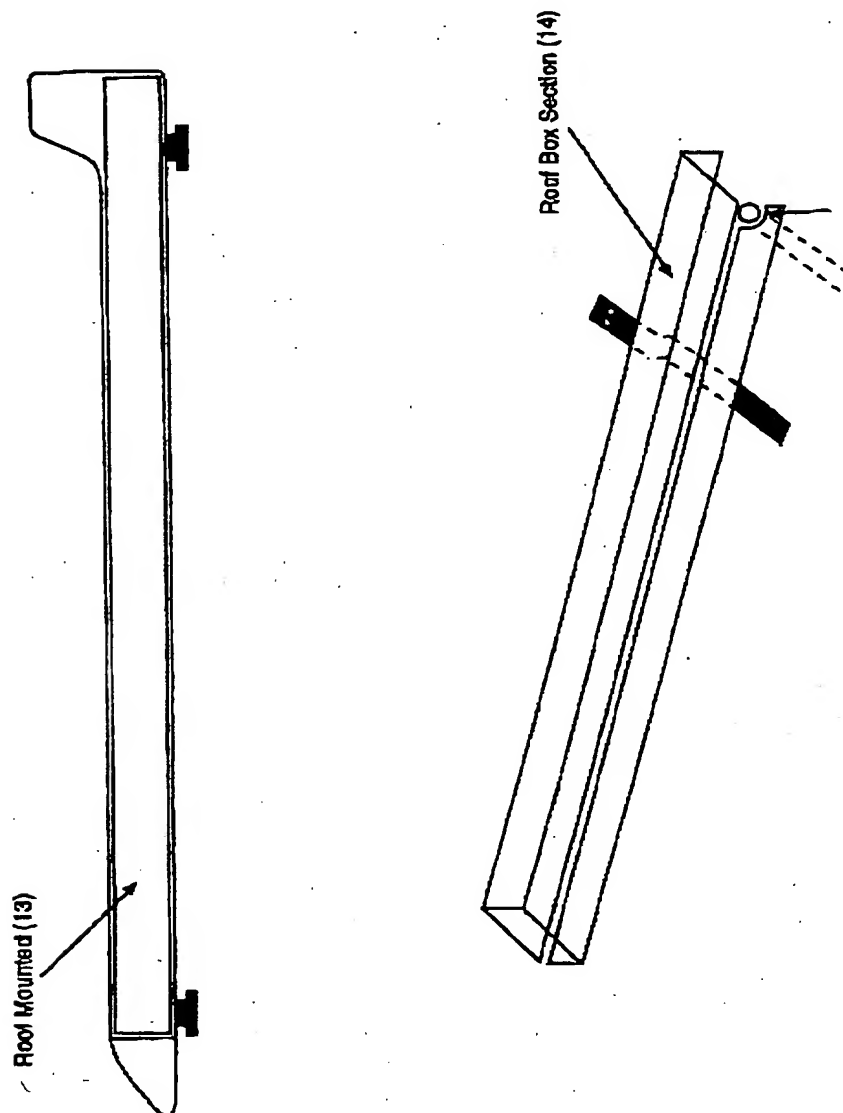
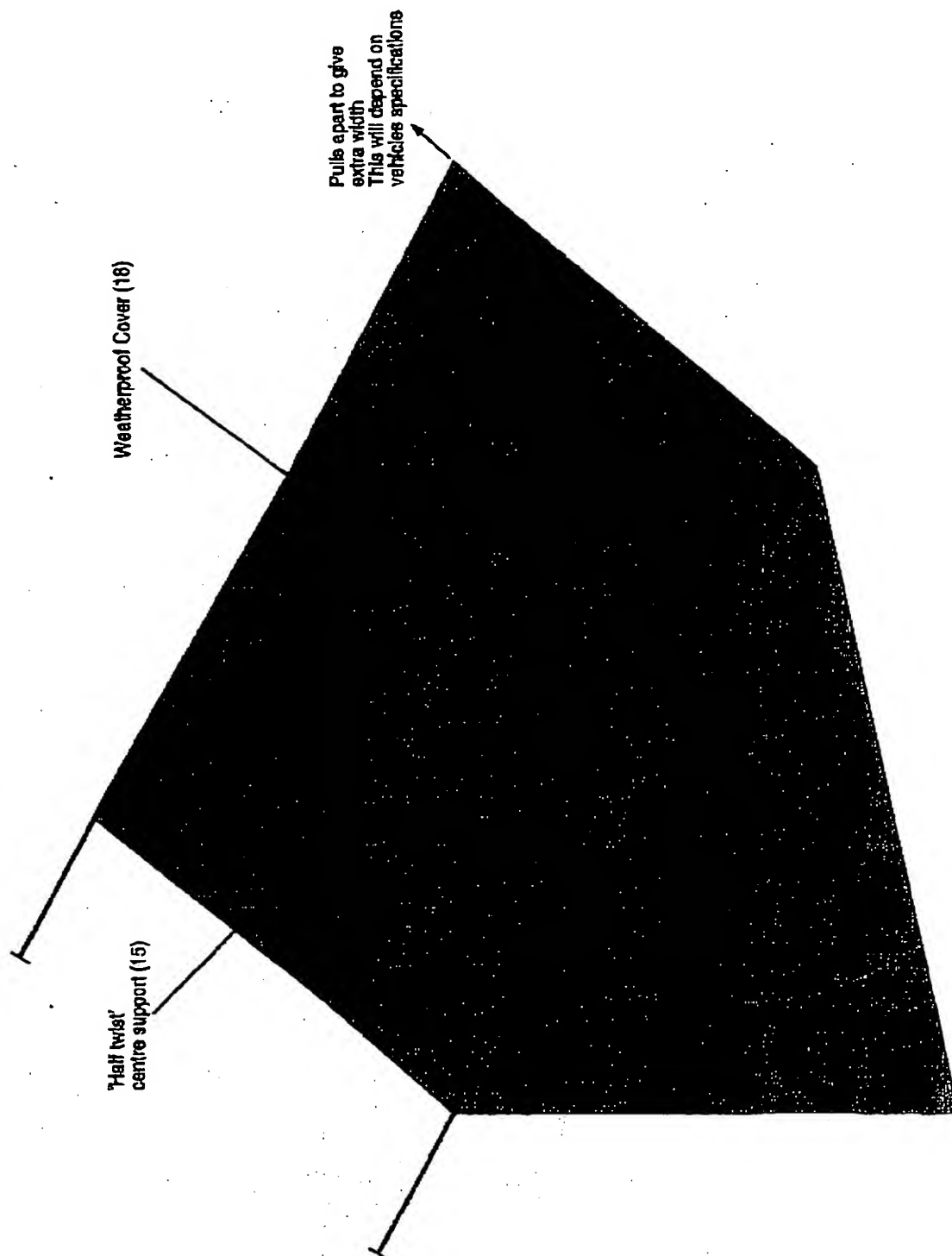


Figure 4/4



2349365**'EASY COVER' Protector from Inclement Weather**

This invention relates to a weatherproof cover fitted to commercial vehicles, box trailers or multi-purpose vans.

Personnel working outdoors such as telecommunications engineers, electricians, gas fitters and roadside traders often have to spend considerable periods of time exposed to wind, rain, sleet or snow. This can obviously result in considerable discomfort, impair a person's ability to work, allow water ingress into work areas and soil goods for sale.

The Easy Cover is an extendible and retractable structure manufactured from lightweight tubing, attached to a waterproof cover. The Easy Cover stowes in its own container, readily mounted on the host vehicle's roof or within the host vehicle's roof box section. The cover is quickly withdrawn from its container and deployed to form a completely weatherproof structure.

In most installations, the Easy Cover affords weatherproof protection in any one position, throughout a full 360 degree arc. The cover is ideal for tradesman, technicians and engineers servicing outside installations, while being retrofittable or readily incorporated on vehicle build.

A description of the assembly and operation of the Easy Cover is given with reference to the following illustrations:

- Figure 1 General Arrangement
- Figure 2 Tubular Frame
- Figure 3 Mounting and Stowage
- Figure 4 Weatherproof Cover

The Easy Cover comprises a weatherproof cover (Figure 1(7) and Figure 4 (16)), 'half-twist' centre support (Figure 4 (15)) a tubular framework (Figure 1(2)), deployment handle (Figure 1 (3)), bridge blind (Figure 1 (1)), grub screw (Figure 1 (4)), mounting blocks (Figure 1 (6)), lock pins (Figure 1 (5)) and stabilising bars (not illustrated). The Easy Cover is either roof mounted (Figure 3 (13)) or stowed within the vehicle roof box section (Figure 3 (14))

The tubular framework (Figure 2/4) comprises two horizontal struts, two uprights and a cross strut. Each horizontal strut is an assembly of three tubes - an inner tube

Easy Cover, protection from inclement weather- Continued

(Figure 2 (8)), mid-tube (Figure 2 (9)), and outer tube (Figure 2 (10)) - placed within one another. The inner tube is secured and hinged to the main support framework, and, when the deployment handle is pulled, the tubes slide over one another until the Easy Cover is fully extended horizontally. Internal mechanisms lock each tube in position when the Easy Cover is fully extended.

Each upright swivels on a corresponding horizontal strut. Each upright is an assembly of two tubes, an inner tube (Figure 2 (12)) and outer tube (Figure 2 (11)). Each outer tube is fixed at its upper end, allowing the inner tube of the upright to be pulled downwards from within the outer tube, thereby extending the upright. An internal stop prevents the inner tube from fully withdrawing. A threaded drilling, located close to the base of the outer tube, accepts a small grub screw, used to lock the inner tube in the fully down position. In the stowed position, the horizontal struts and uprights lie parallel to one another, attached by clips (not illustrated).

The uprights locate into mounting blocks (option 1) or stabilising bars (option 2) and secured by locking pins.

A spherical bearing assembly (not illustrated) can be fitted to the underside of the Easy Cover container and to the roof of the host vehicle (roof mounting only). The Easy Cover container can then rotate about the bearing, allowing the cover to be positioned at any point within the full 360 degree arc.

A multiple Easy Cover configuration can be installed, on, for example, a light commercial van. One Easy Cover would be fitted within the roof box-section and the other Easy Cover fitted on the roof. The box-section cover can be deployed from the rear access doors, while the roof-mounted cover can be deployed from the side access doors.

The Easy Cover can also be extended beyond normal operating dimensions, however, in so doing, a gap is created between the host and the Easy Cover. To counter this problem, a companion device known as a 'bridge blind' is installed above the Easy Cover container. The bridge blind is connected to the cover by means of a cable (not illustrated). The bridge blind will extend whenever the Easy Cover is deployed to two-

Easy Cover, protection from inclement weather- Continued

thirds or more of its length. When extended, the bridge blind also helps with rain 'run-off.'

The Easy Cover can also be 'flared' outwards a limited amount, the hinged mountings of the horizontal struts allowing some lateral movement.

Operation

Option 1 (for stationing upright at approximately 45 degrees to the ground)

The deployment handle is pulled fully rearwards to withdraw the Easy Cover from its container. The uprights are then unclipped, rotated downwards, extended, and located into each respective mounting block. The grub screw on the lower end of each outer tube is tightened to lock the structure. Finally, the 'half-twist' centre support is rotated through 90 degrees, creating a ridge in the protective cover to help water 'run-off.'

Stowing the Easy Cover is a reversal of the above procedure.

Option 2 (for near vertical/ vertical positioning of upright)

Two stabilising bars are positioned on the ground. The rear locational lug of each stabilising bar fits into the corresponding cargo floor mounting block (commercial vehicle applications). The deployment handle is pulled fully rearwards to withdraw the Easy Cover from its container. The uprights are unclipped, rotated downwards, and located into the forward lug of each stabilising bar. The grub screw on the lower end of each outer tube is tightened to lock the structure. Finally, the 'half-twist' centre support is rotated through 90 degrees to help water 'run-off.'

Stowing the Easy Cover is a reversal of the above procedure.

4

Claims

1. A weather proof cover comprising a vehicle mounted extendible and retractable structure manufactured from lightweight tubing, with waterproof covering, which provides weather protection rearwards and outwards from the vehicle's rear access doors.
2. A weatherproof cover as claimed in Claim 1 wherein the weatherproof cover is stowed within a container on a vehicle roof, or within a vehicle's roof box-section.
3. A weatherproof cover as claimed in Claim 1 wherein the container can be rotated and positioned anywhere about its own axis when mounted on a vehicle.
4. A weatherproof cover as claimed in Claim 1 with extendible and retractable telescopic frame
5. A weatherproof cover as claimed in Claim 1 with mounting blocks fitted to the host vehicle's floor.
6. A weatherproof cover as claimed in Claim 1 with mounting blocks fitted to the host vehicle's floor and stabilising bars fitted to the mounting blocks.

6

Amendments to the claims have been filed as follows

- 1. A weatherproof cover comprising a container or housing mounted on a vehicle roof and containing an extractable and retractable structure manufactured from lightweight tubing with a waterproof cover attached, the container or housing being mounted on a bearing on the vehicle roof for rotation about a vertical axis through a full 360 degree arc to allow all round protection at any point around the vehicle.**
- 2. A weatherproof cover as claimed in Claim 1 wherein the extendible and retractable frame is telescopic.**
- 3. A weatherproof cover as claimed in Claim 1 or Claim 2 wherein mounting blocks are fitted to the host vehicles rear door lower hinges.**
- 4. A weatherproof cover as claimed in Claim 1 and substantially as herein before described with reference to the accompanying drawings.**



The
Patent
Office

6



INVESTOR IN PEOPLE

Application No: GB 9910137.0
Claims searched: All

Examiner: Paul Gavin
Date of search: 6 September 1999